FIG. 1

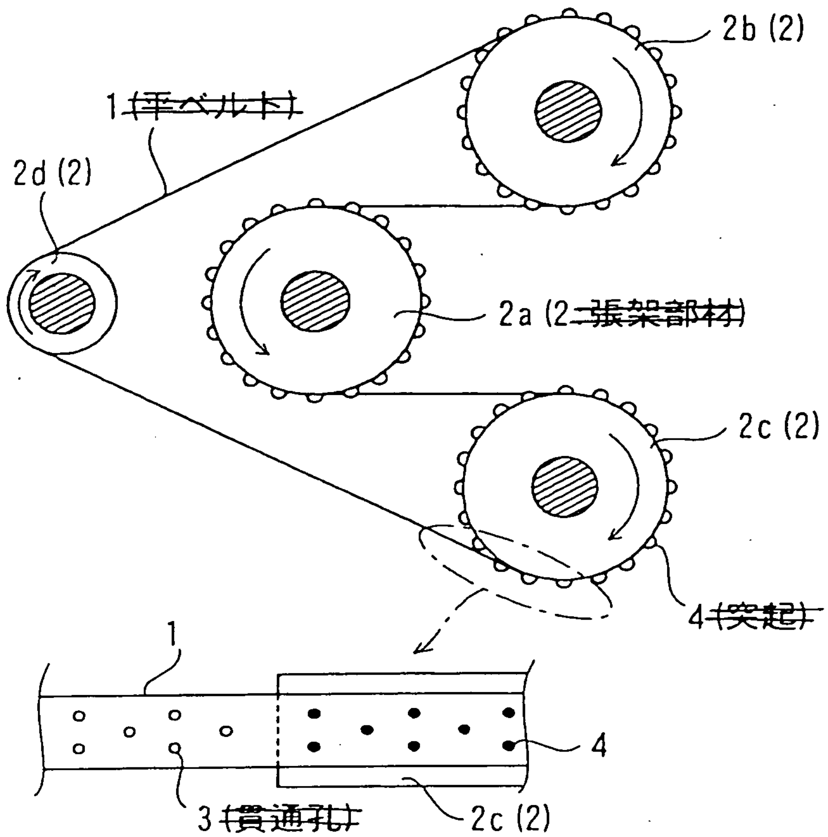


FIG. 2(a) ~~(a)~~

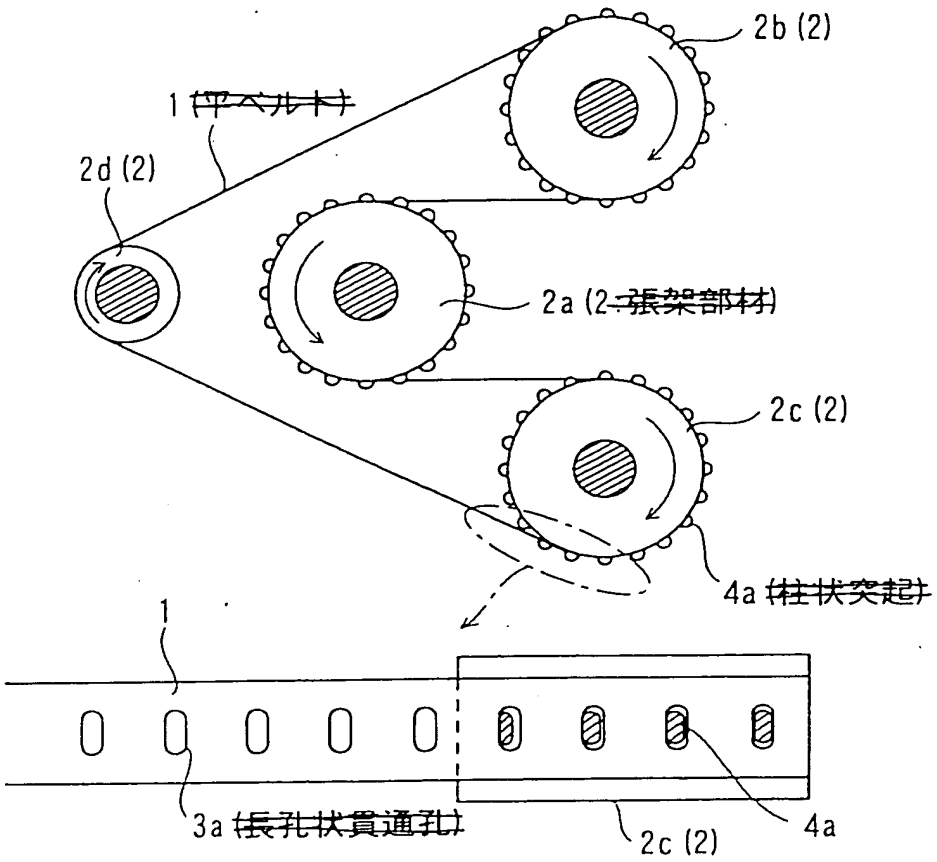


FIG. 2(b) ~~(b)~~

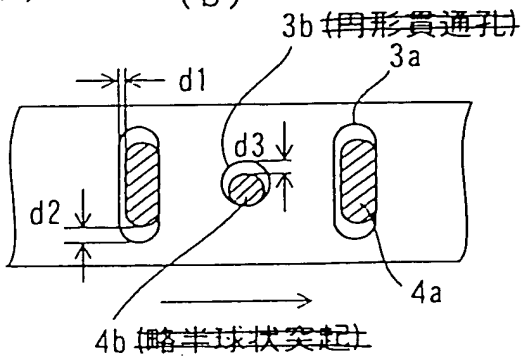
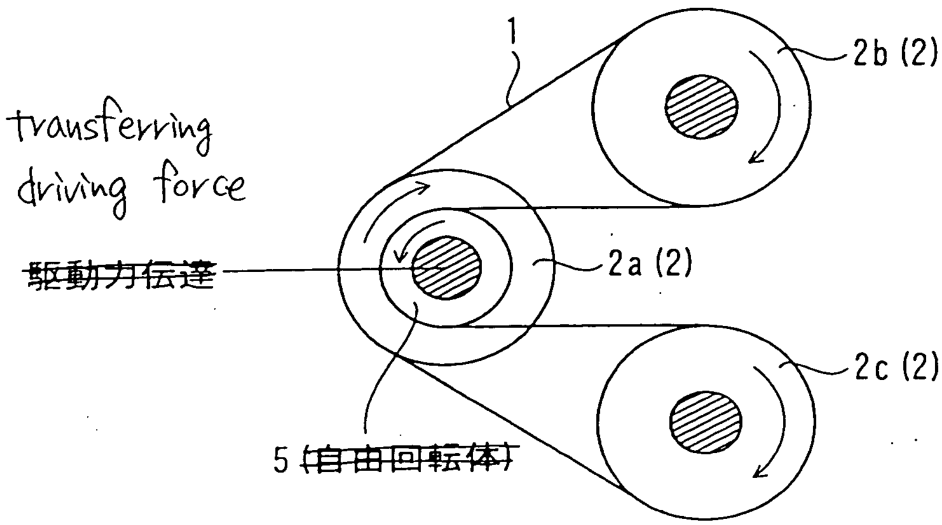


FIG. 3



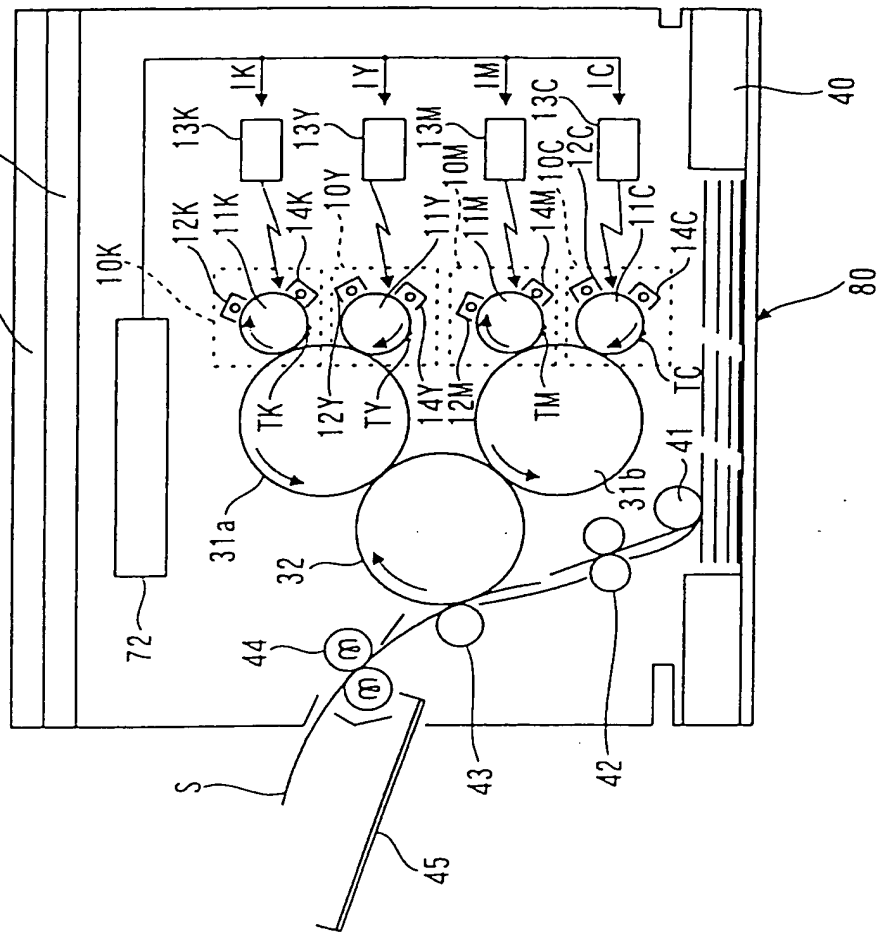

1K
1Y
1M
1C
13K
13Y
13M
13C
12K
11K
14K
10Y
11Y
10M
11M
14M
10C
12C
11C
14C
10K
71
70
80
40
TK
12Y
TY
14Y
12M
TM
TC
41
31a
31b
32
72
44
S
43
42
45

FIG. 4

FIG. 5

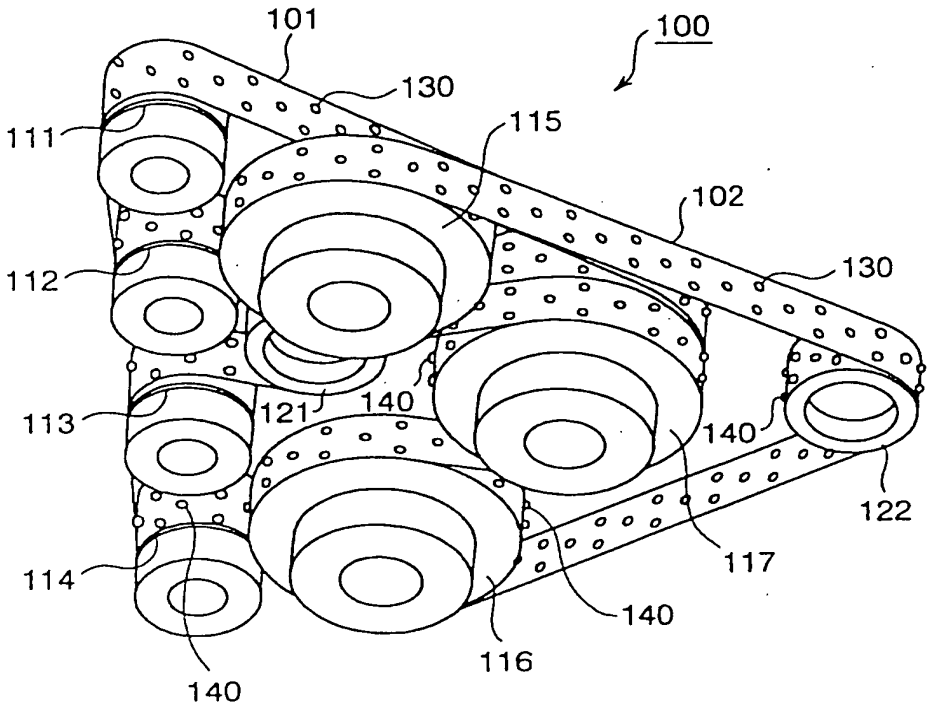

101
100
130
111
115
102
112
130
140
121
140
113
140
122
117
114
140
116
140

FIG. 6(a)

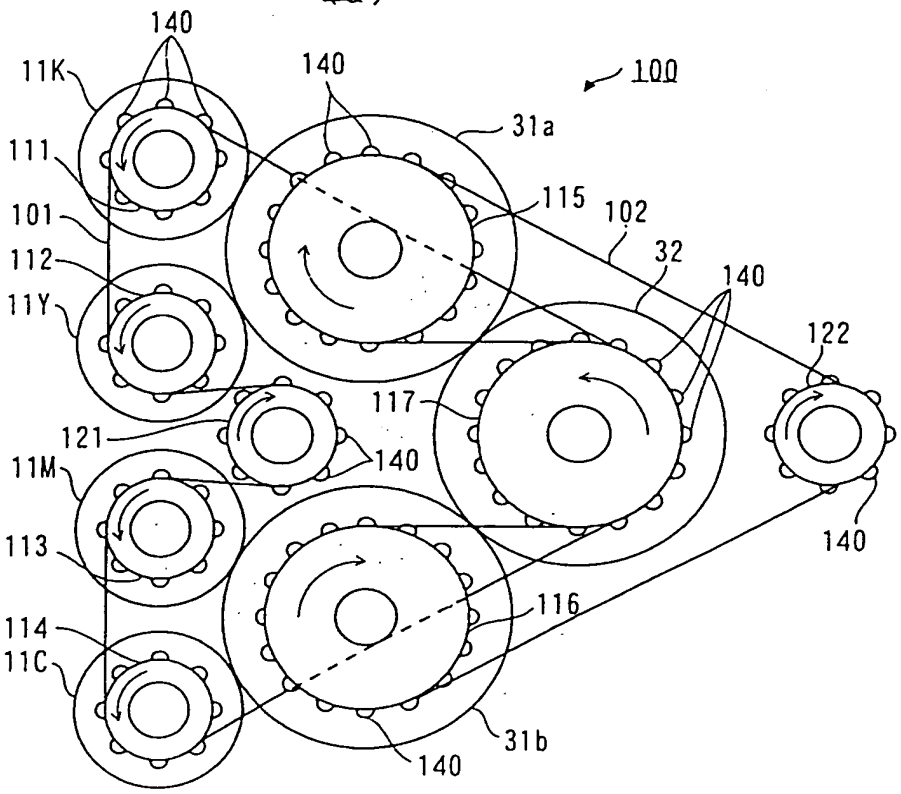

140
11K
140
100
31a
111
115
102
101
32
112
140
11Y
122
117
121
140
11M
113
140
116
114
11C
31b
140

FIG. 6(b)

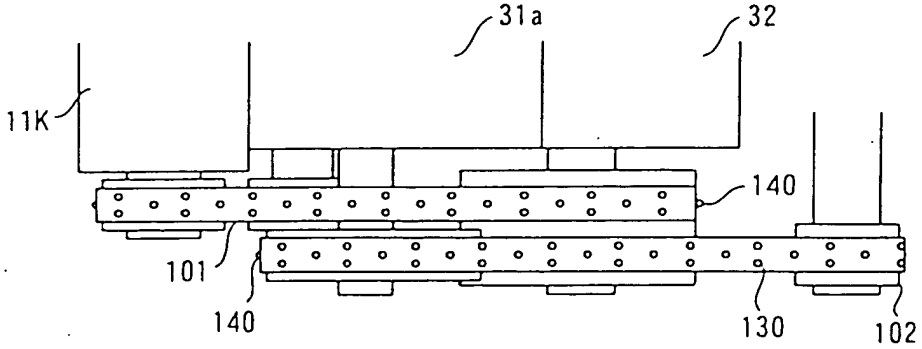

31a
32
11K
140
101
140
130
102

FIG. 7(a)

~~(a)~~

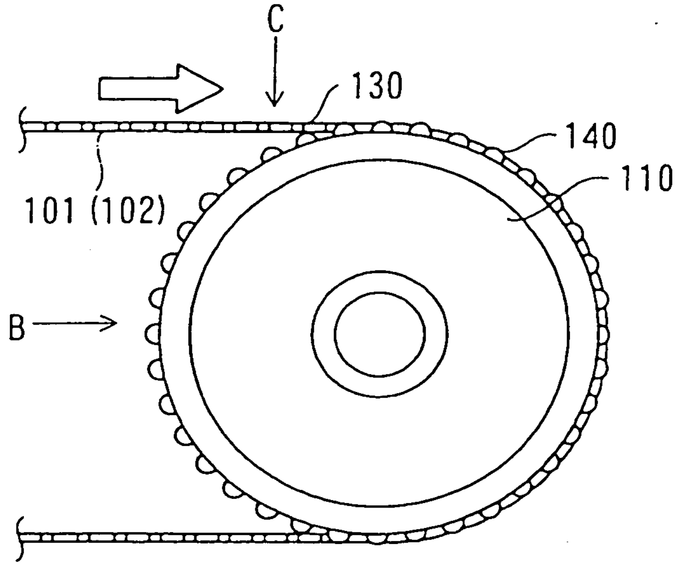


FIG. 7(b)

~~(b)~~

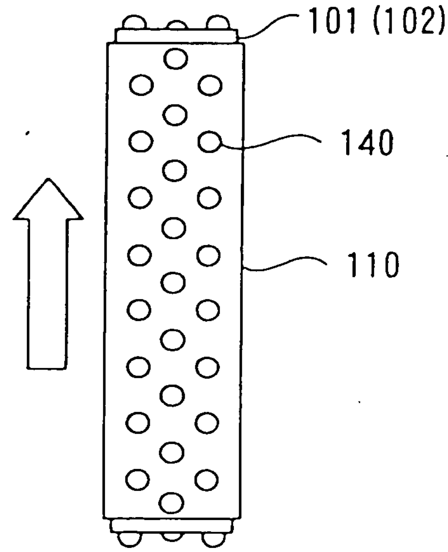


FIG. 7(c)

~~(c)~~

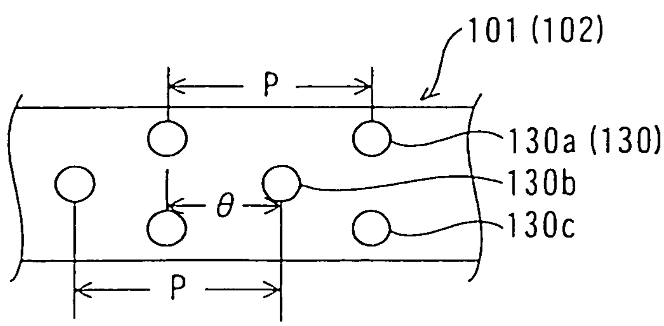


FIG. 8(a)

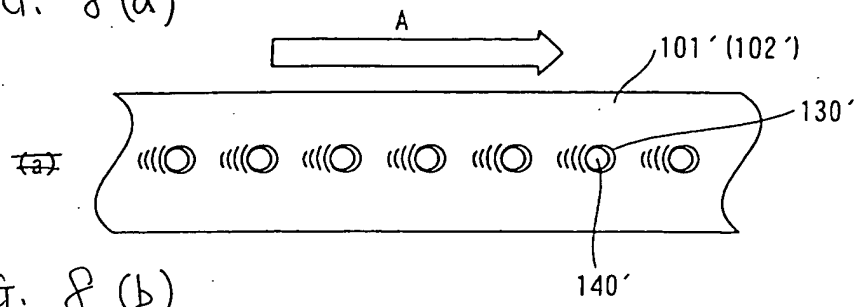


FIG. 8(b)

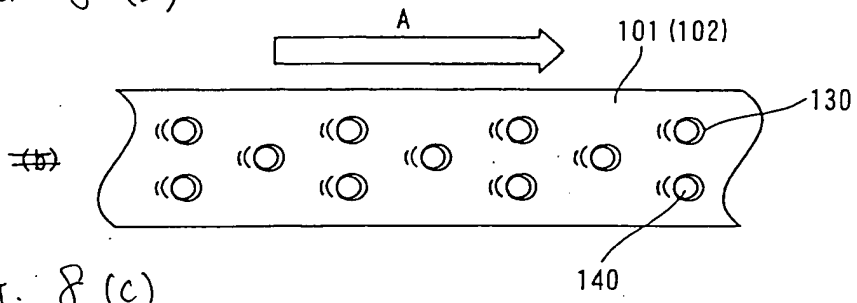


FIG. 8(c)

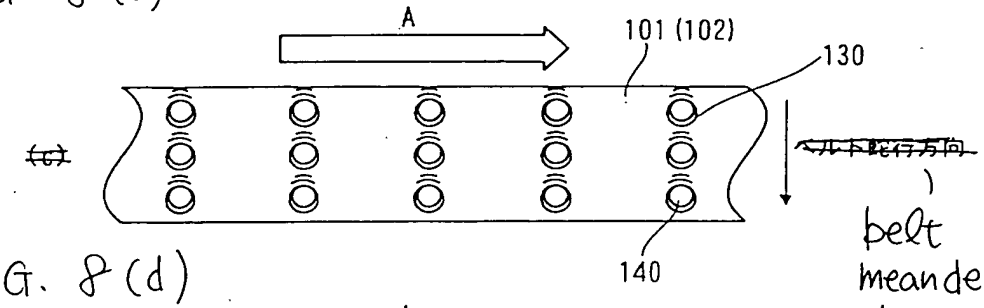


FIG. 8(d)

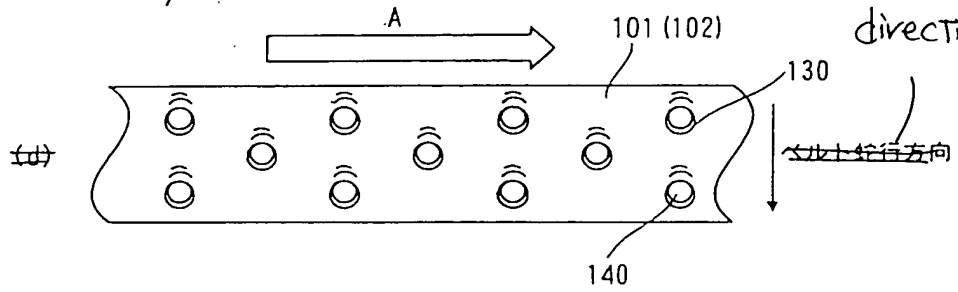


FIG. 9 (a)

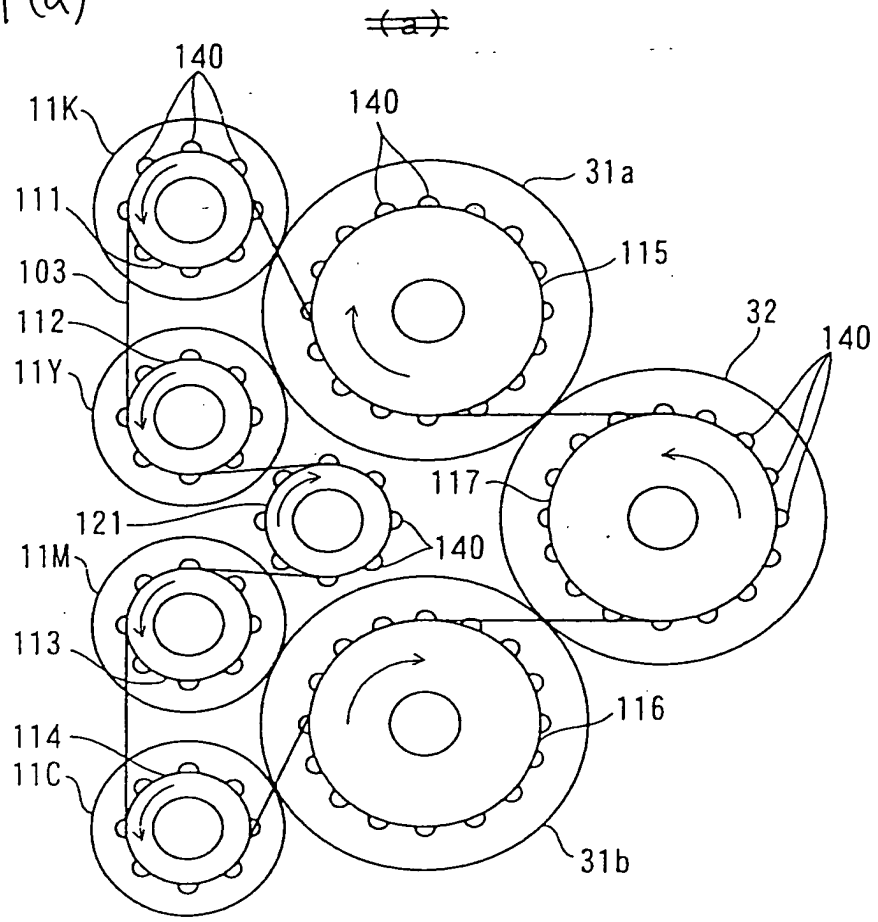

(a)
140
11K
140
31a
111
115
103
32
140
112
11Y
117
121
140
11M
113
116
114
11C
31b

FIG. 9 (b)

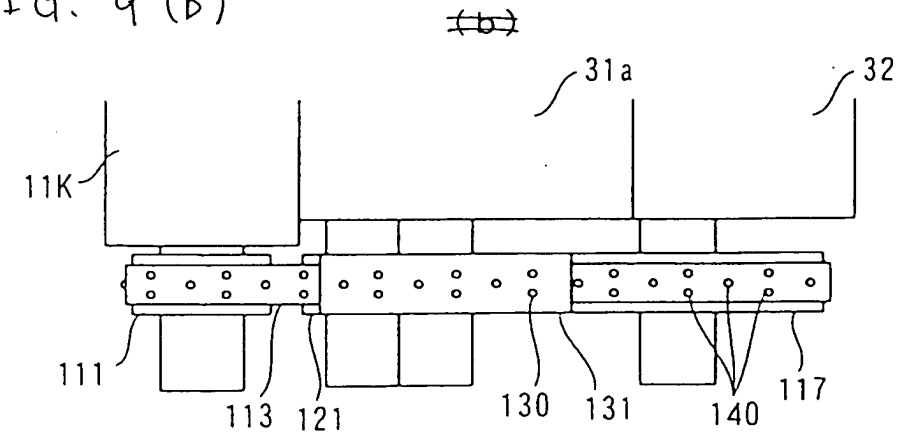

(b)
31a
32
11K
111
113
121
130
131
140
117

FIG. 10

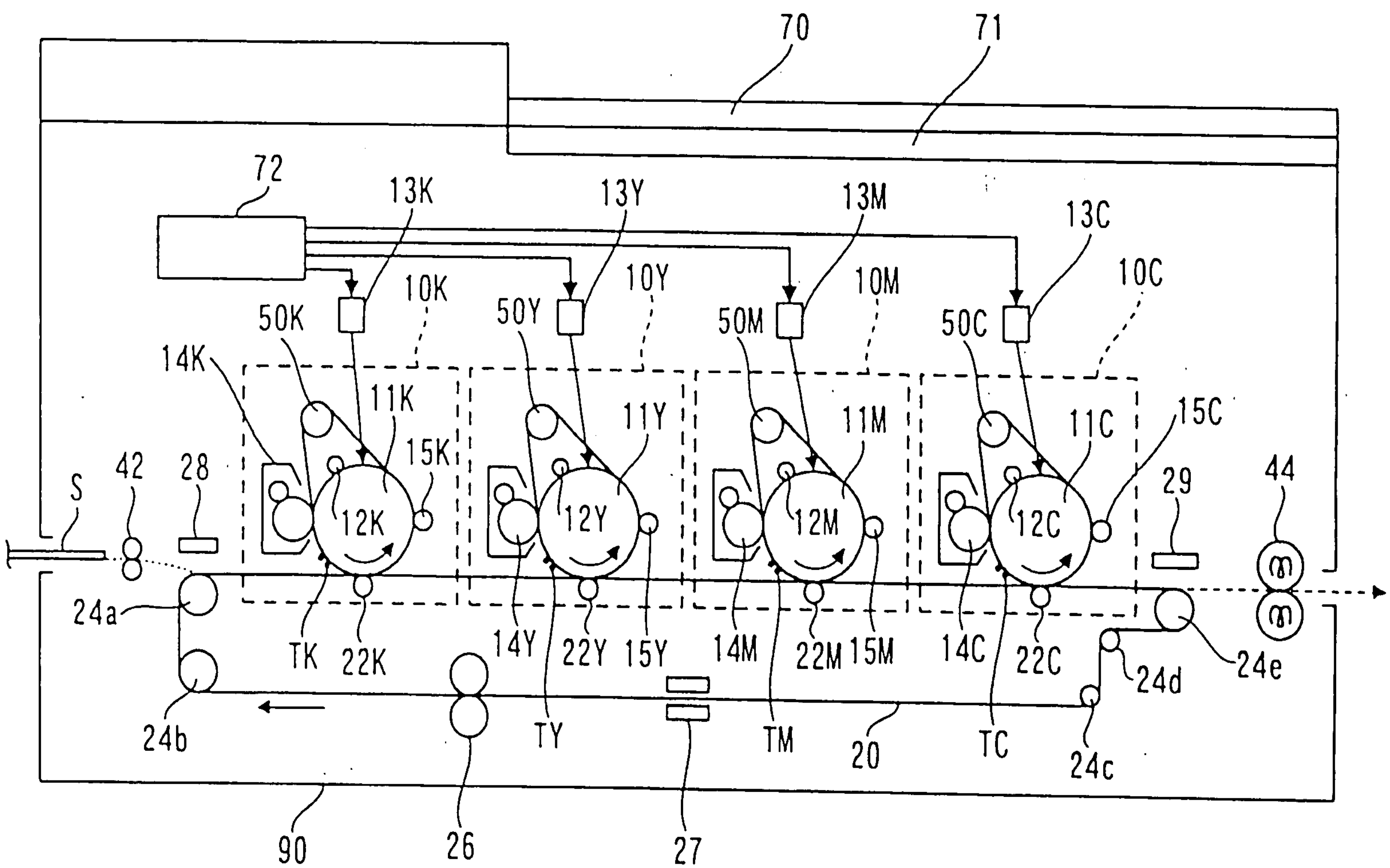

70
71
72
13K
13Y
13M
13C
10K
10Y
10M
10C
50K
50Y
50M
50C
14K
11K
11Y
11M
11C
15K
15C
S
42
28
12K
12Y
12M
12C
29
44
24a
TK
22K
14Y
22Y
15Y
14M
22M
15M
14C
22C
24d
24e
24b
TY
TM
20
TC
24c
90
26
27

FIG. 11(a)

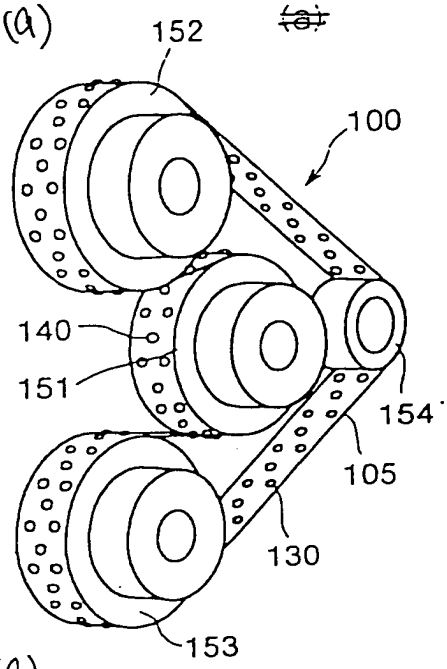


FIG. 11(b)

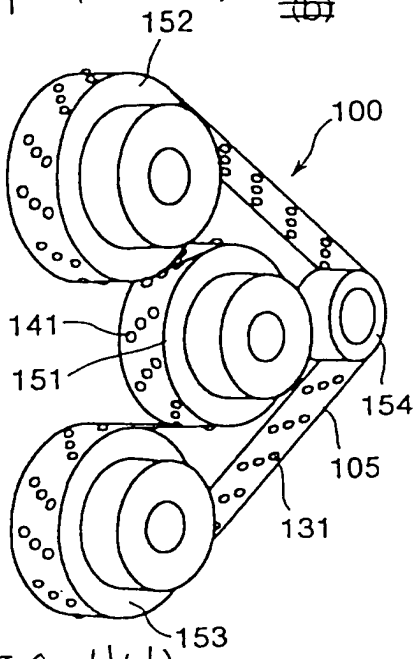


FIG. 11(c)

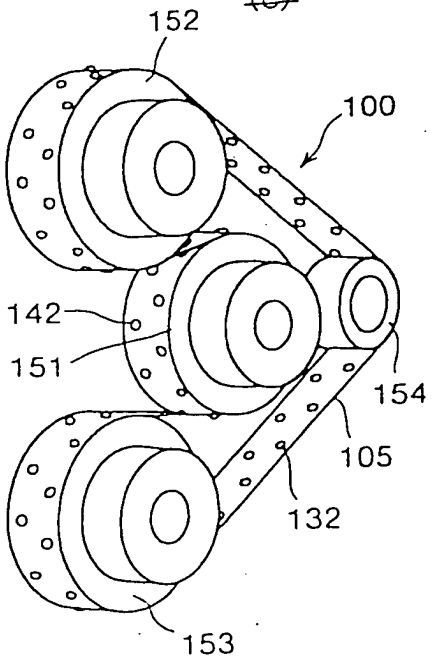


FIG. 11(d)

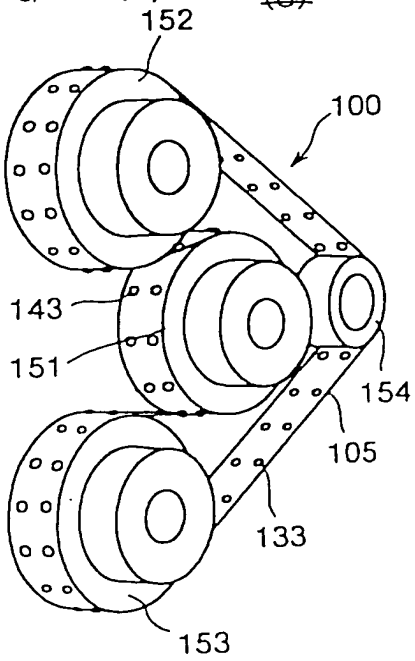


FIG. 12

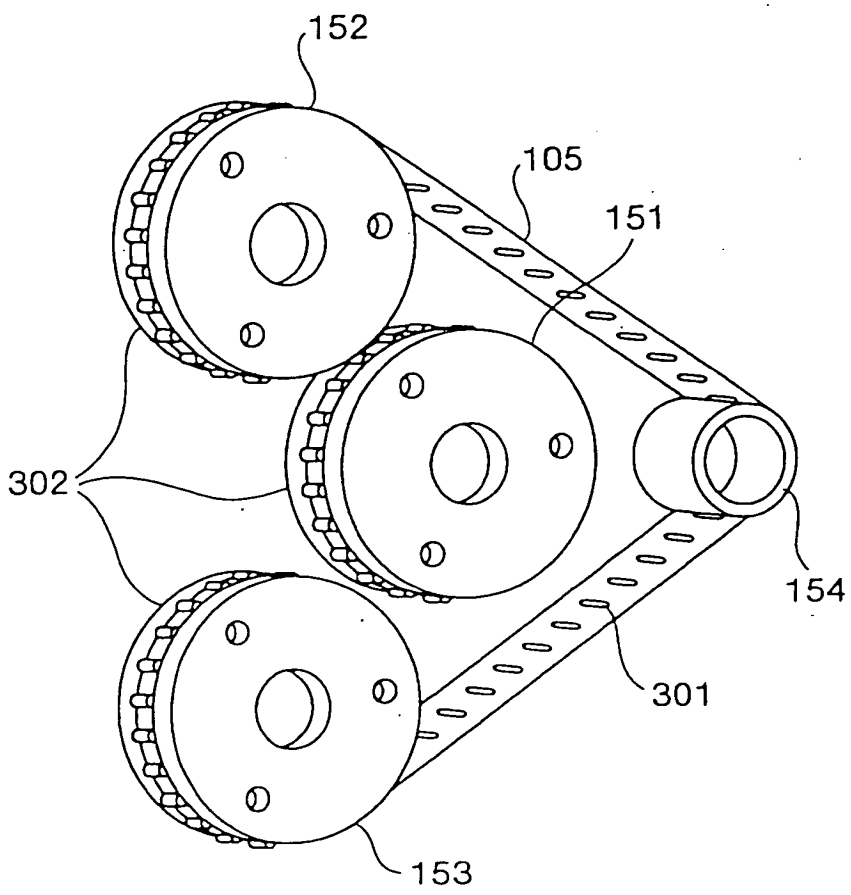


FIG. 13 (a)

~~(a)~~

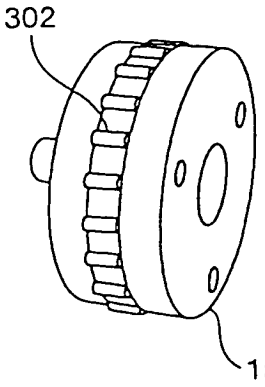


FIG. 13 (b)

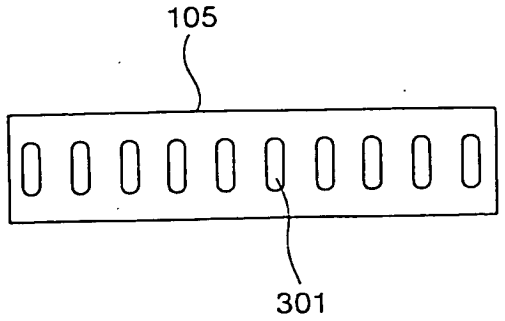


FIG. 13 (c)

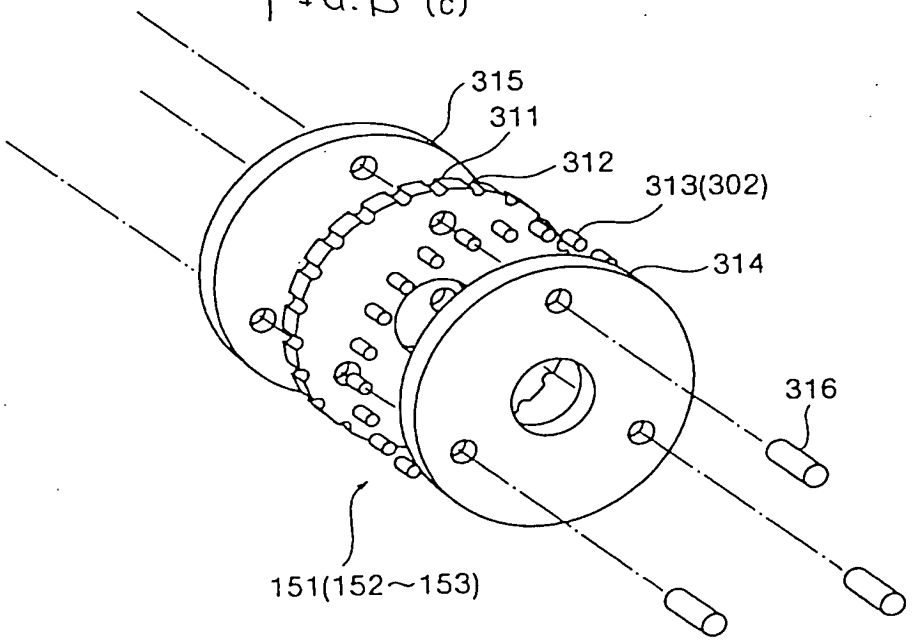


FIG. 14

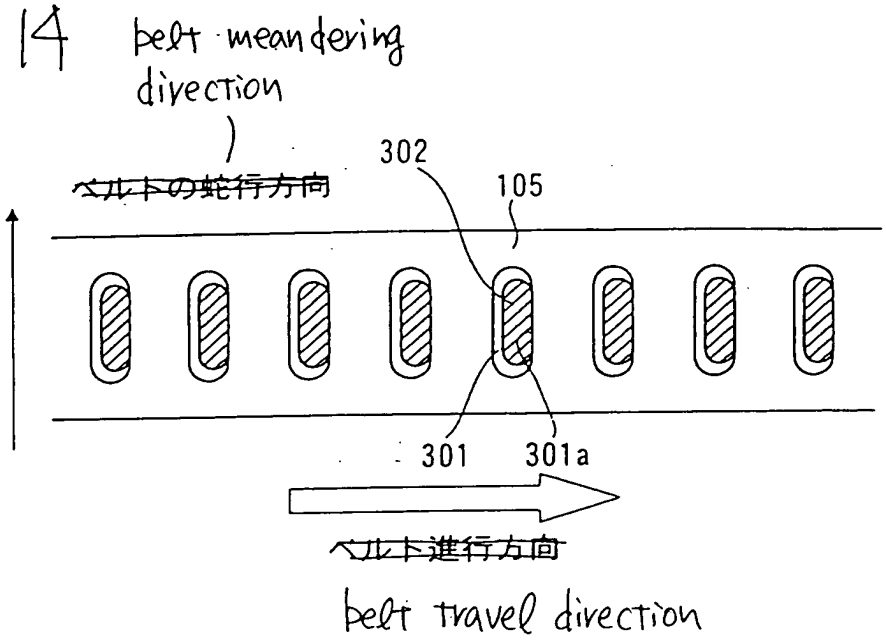


FIG. 15

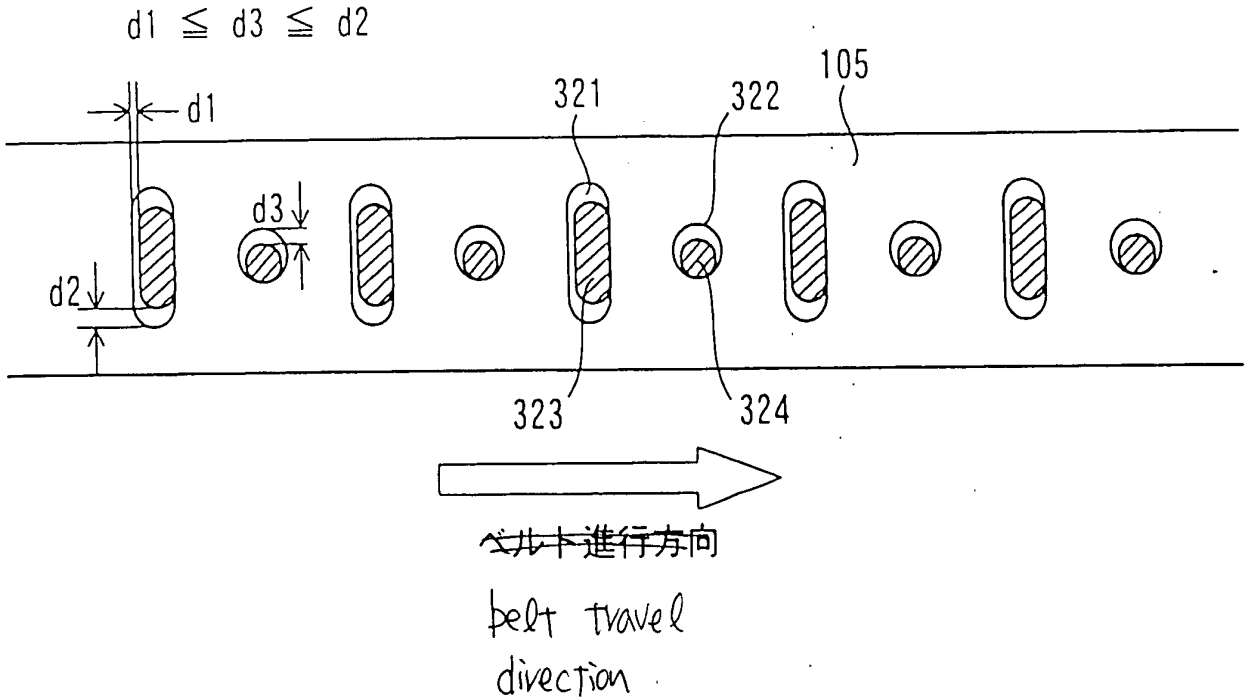

d1 ≦ d3 ≦ d2
d1
d2
d3
105
321
322
323
324
ベルト進行方向
belt travel direction

FIG. 16(a)

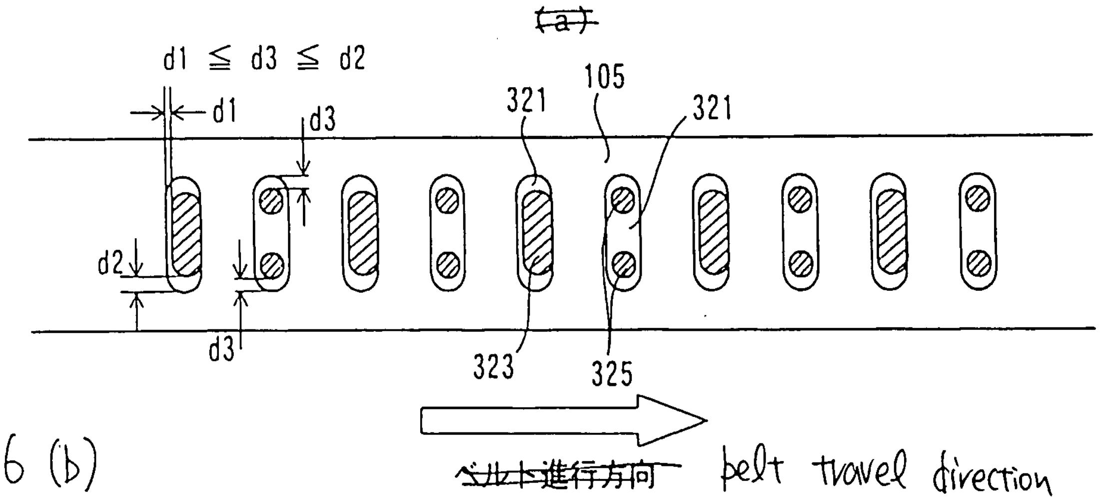


FIG. 16 (b)

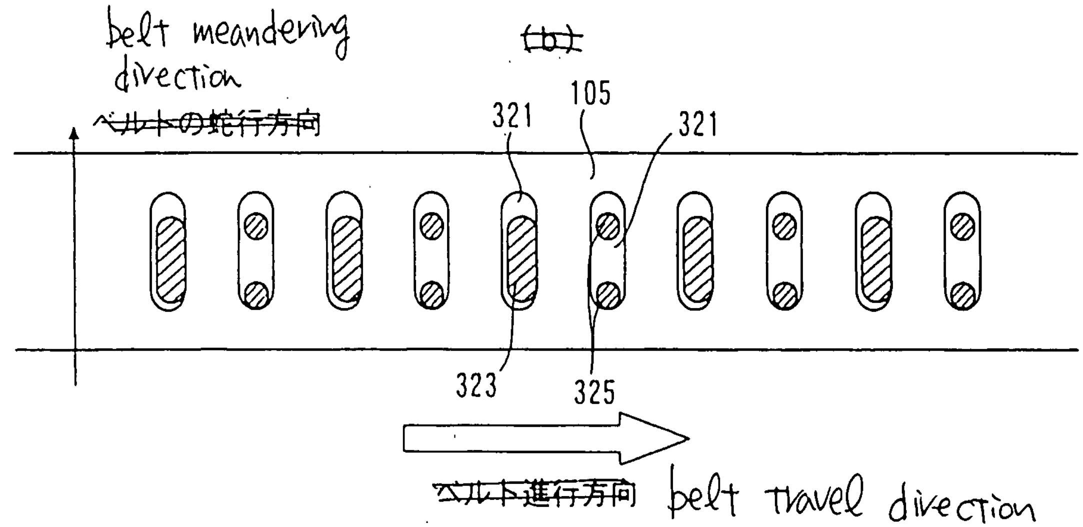


FIG. 17

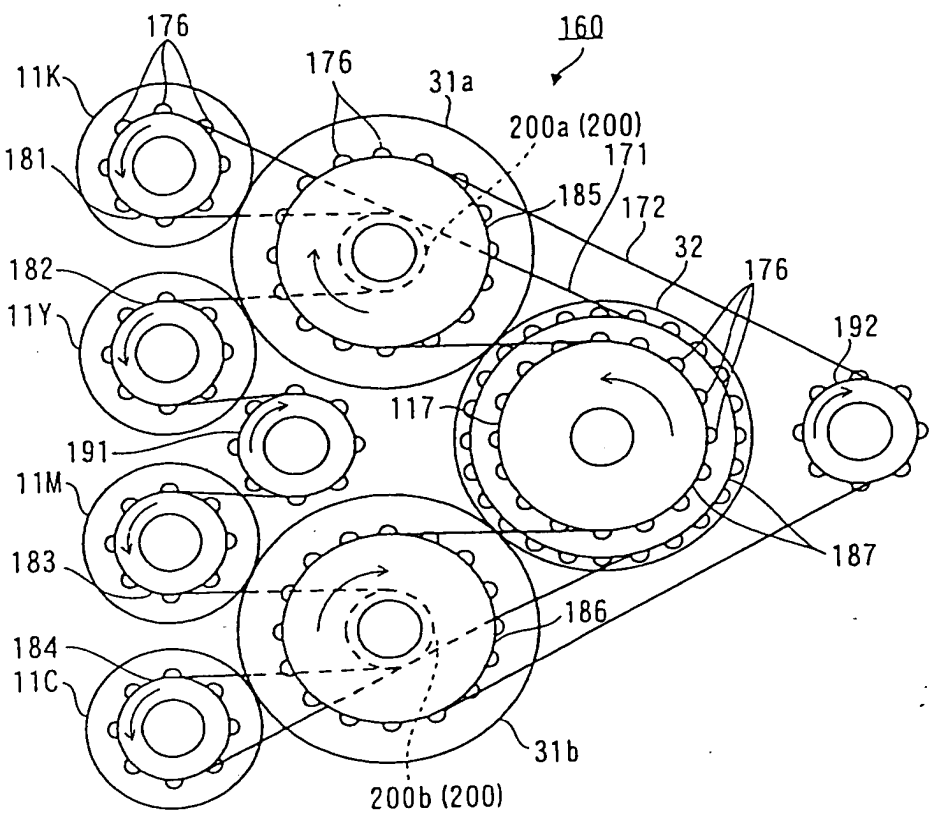

176
160
176
11K
31a
200a (200)
181
171
185
172
32
182
176
11Y
192
117
191
11M
187
183
186
184
11C
31b
200b (200)

FIG. 18

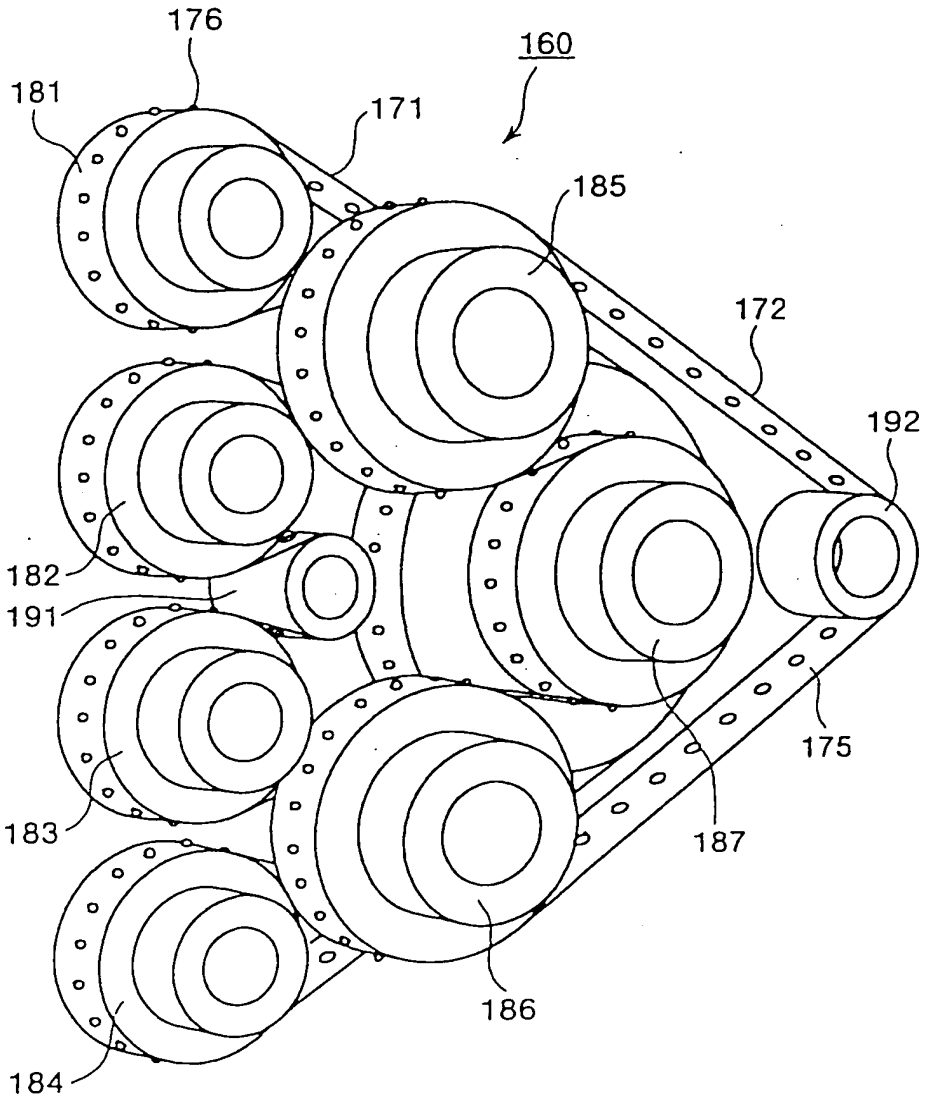


FIG. 19

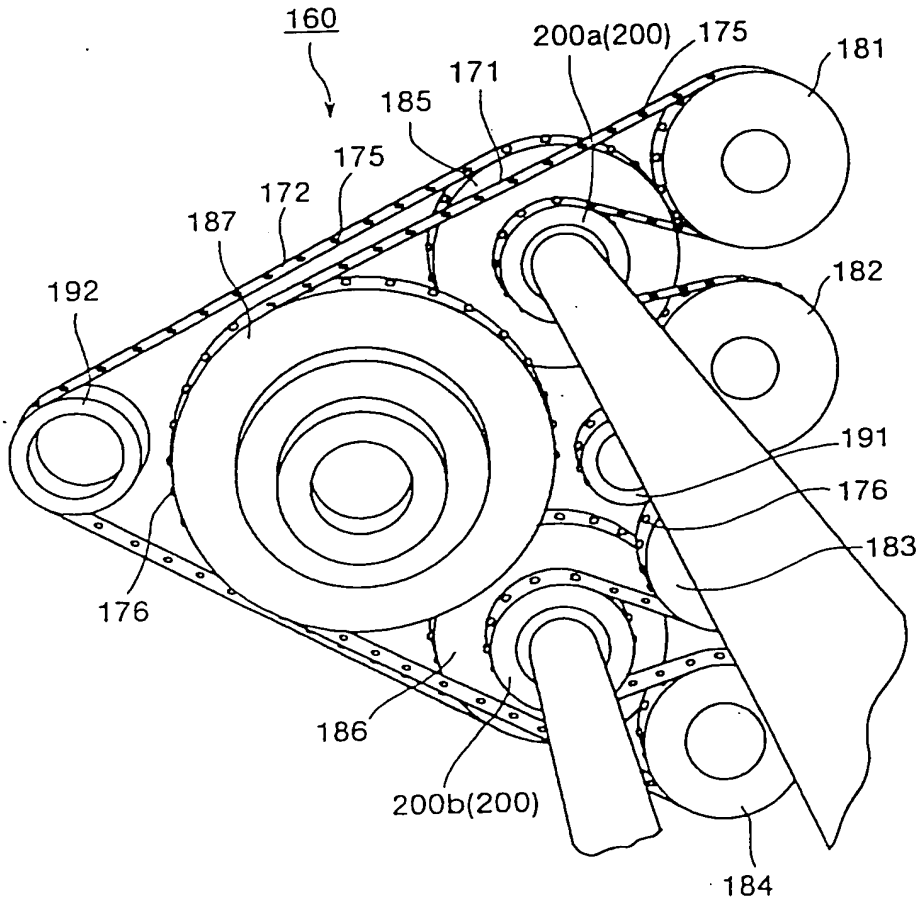

160
200a(200)
175
181
171
185
175
172
187
182
192
191
176
183
176
186
200b(200)
184

FIG. 20(a) ~~(a)~~

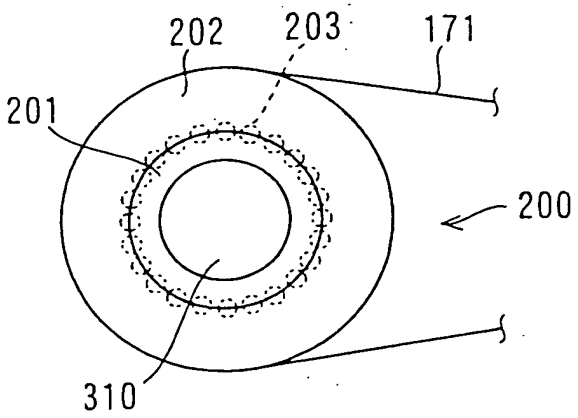
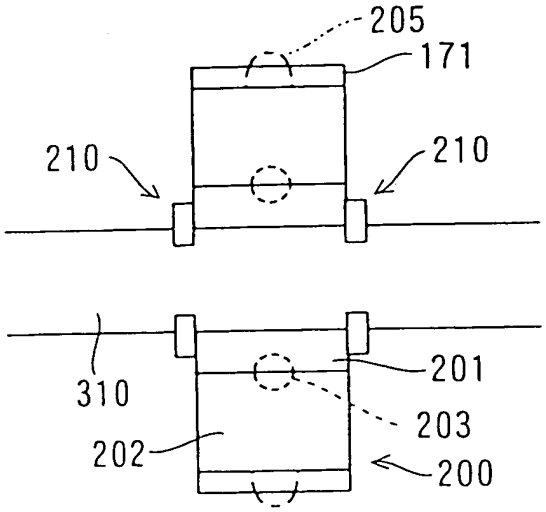


FIG. 20(b) ~~(b)~~



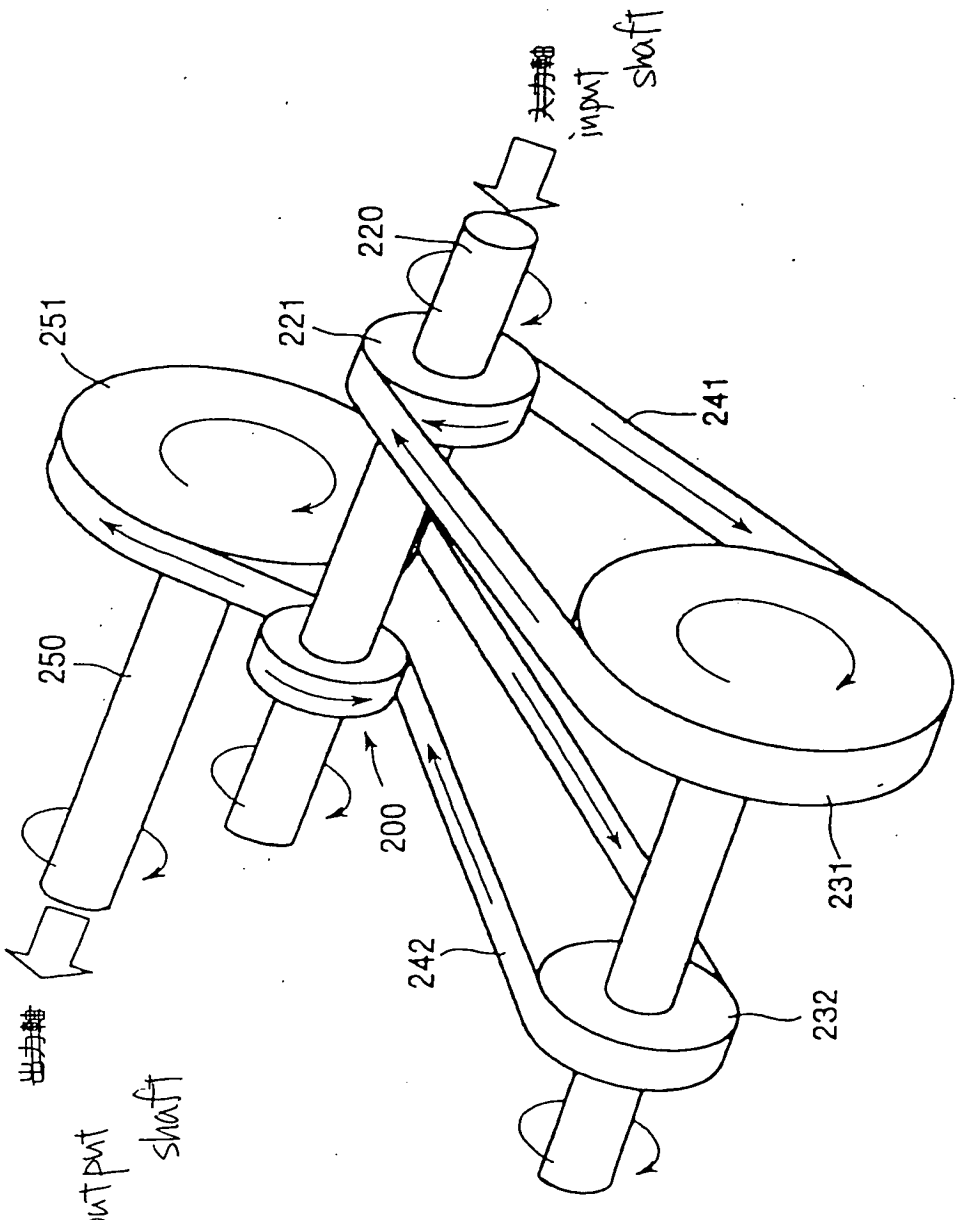


FIG. 21

FIG. 22 (a)

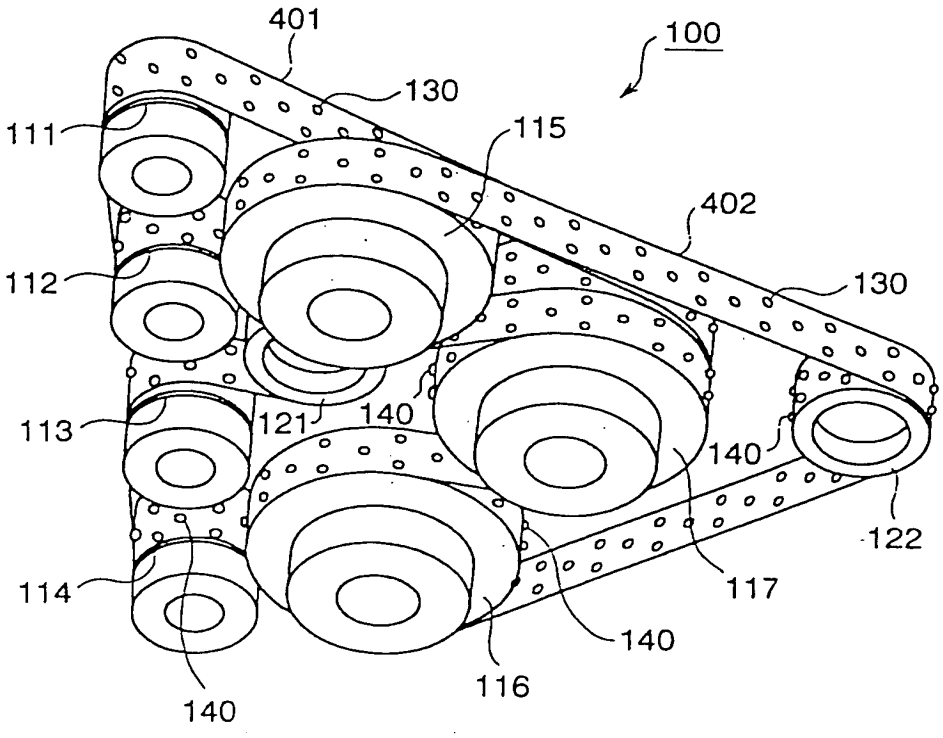


FIG. 22 (b)

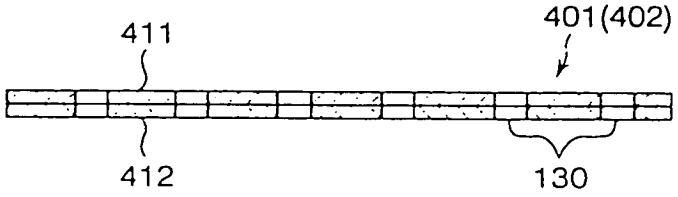


FIG. 23 (a)

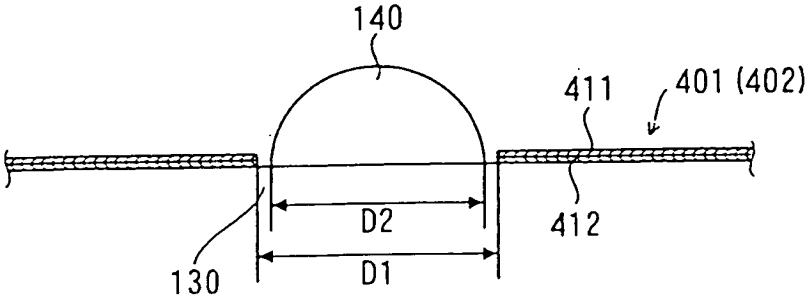


FIG. 23 (b)

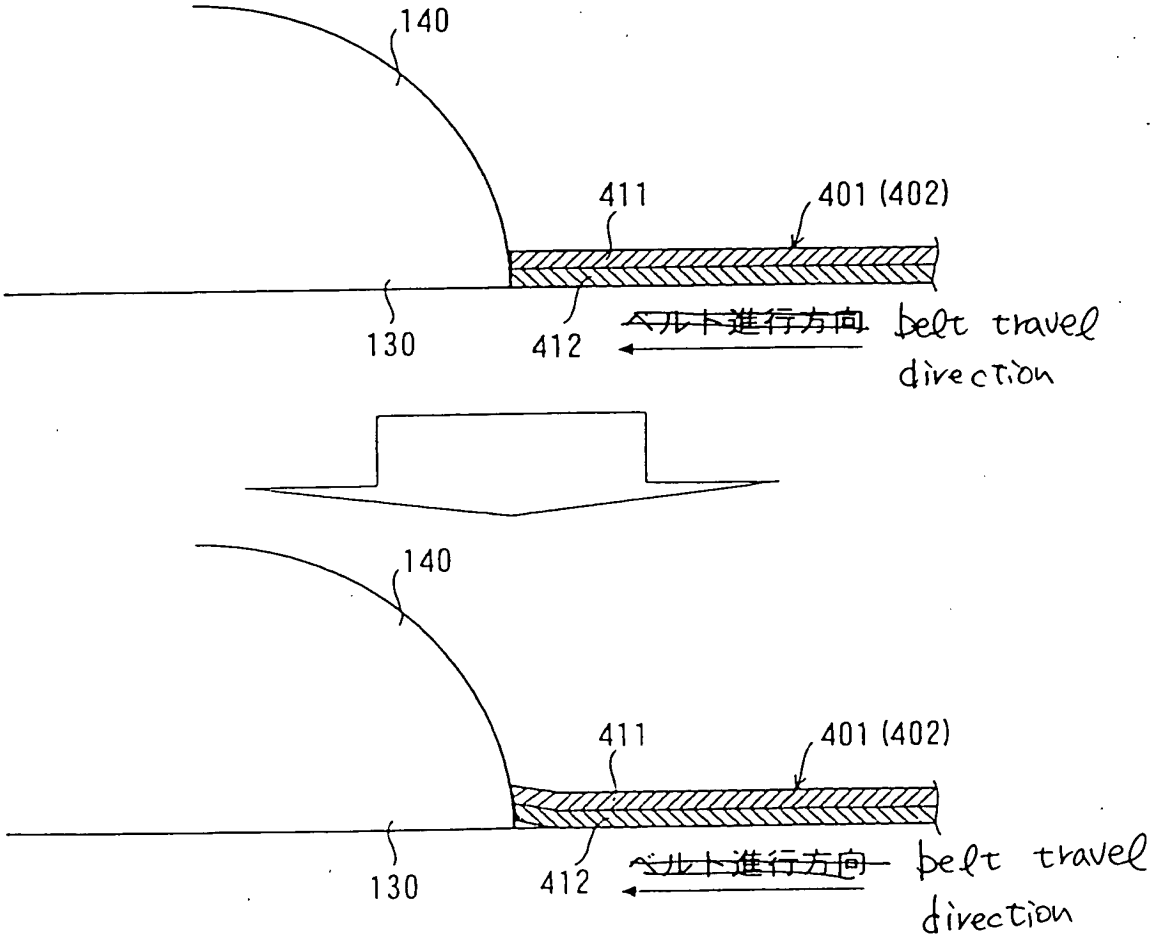


FIG. 24

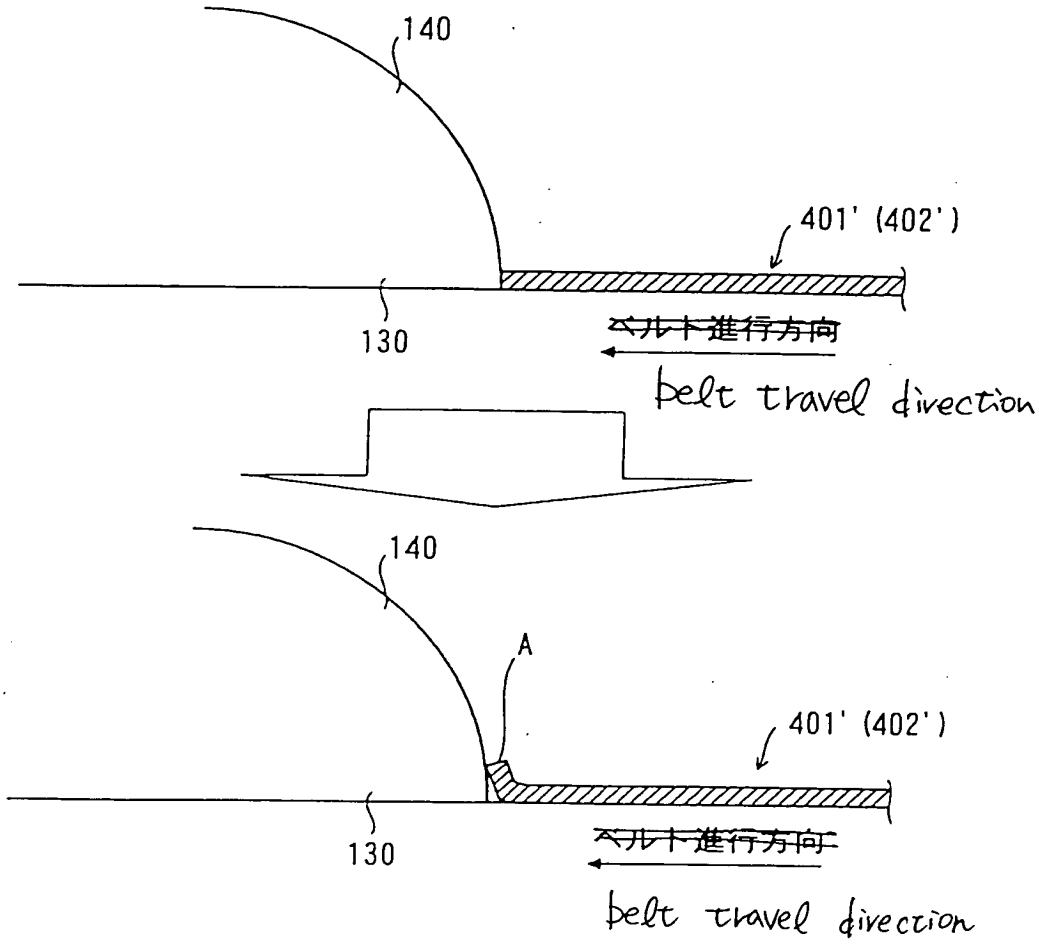
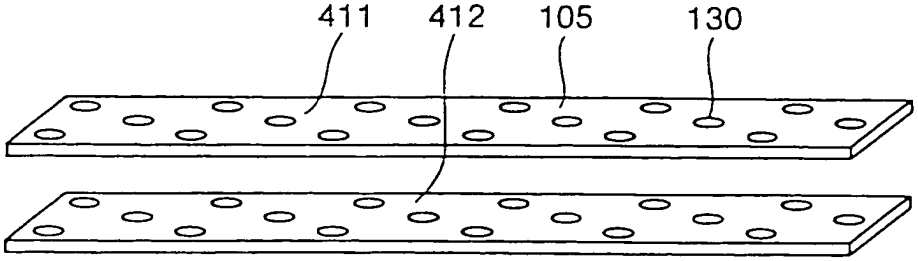
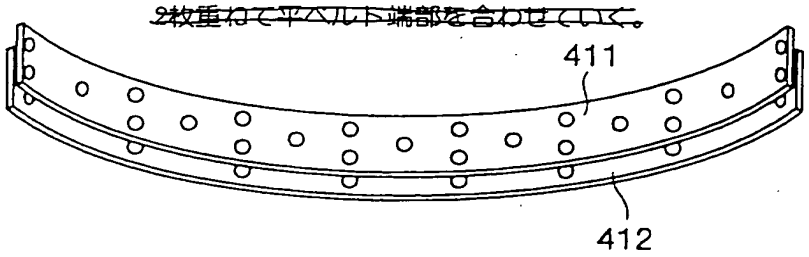

140
401' (402')
130
ベルト進行方向
belt travel direction
140
A
401' (402')
130
ベルト進行方向
belt travel direction

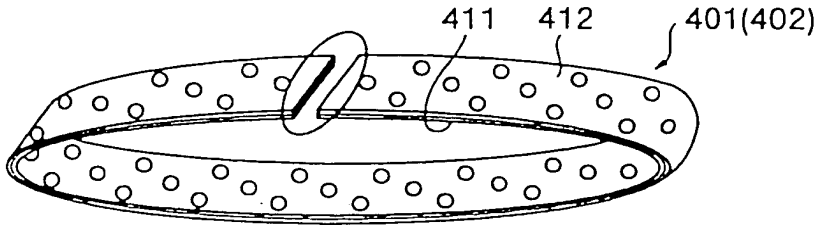
FIG. 25



overlap two sheets of flat belts with each other to align end portions thereof



end portions of two overlapped flat belts is abutted and welded



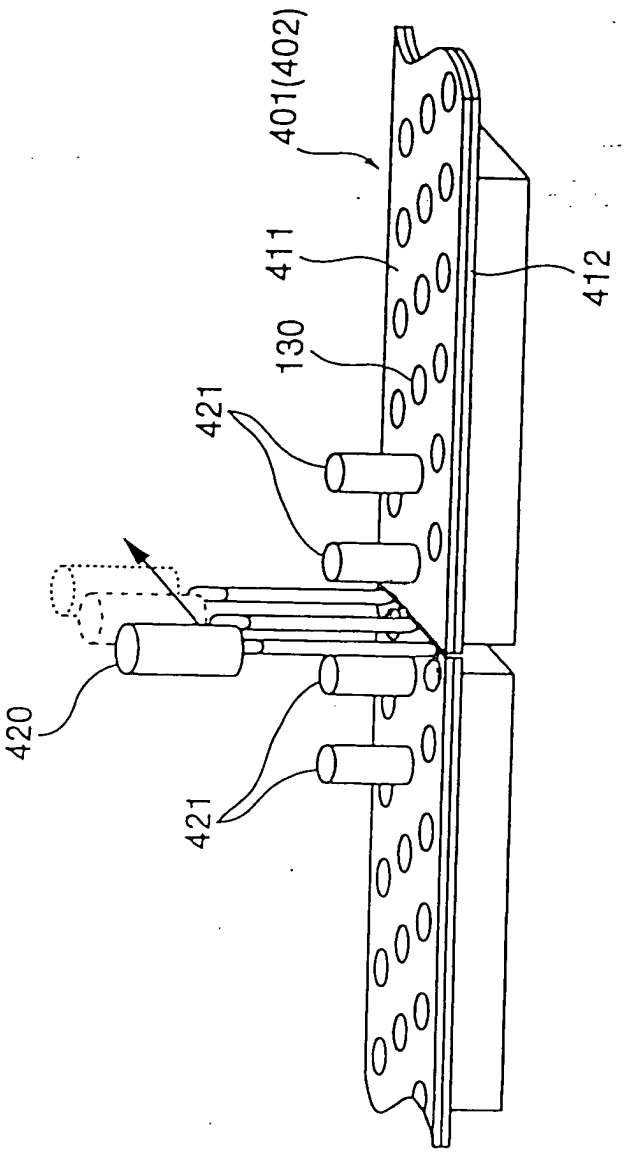


FIG. 26

FIG. 27

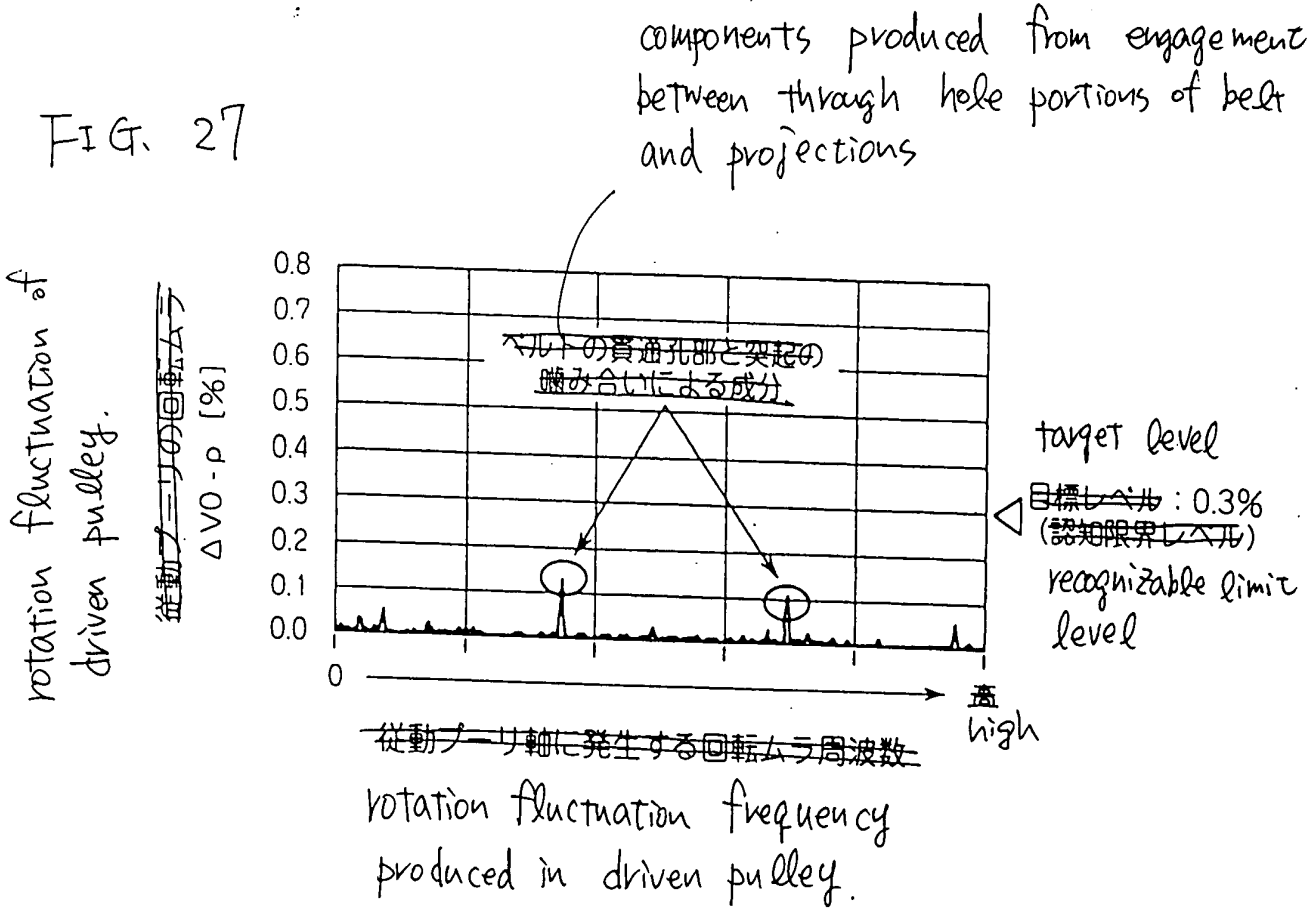
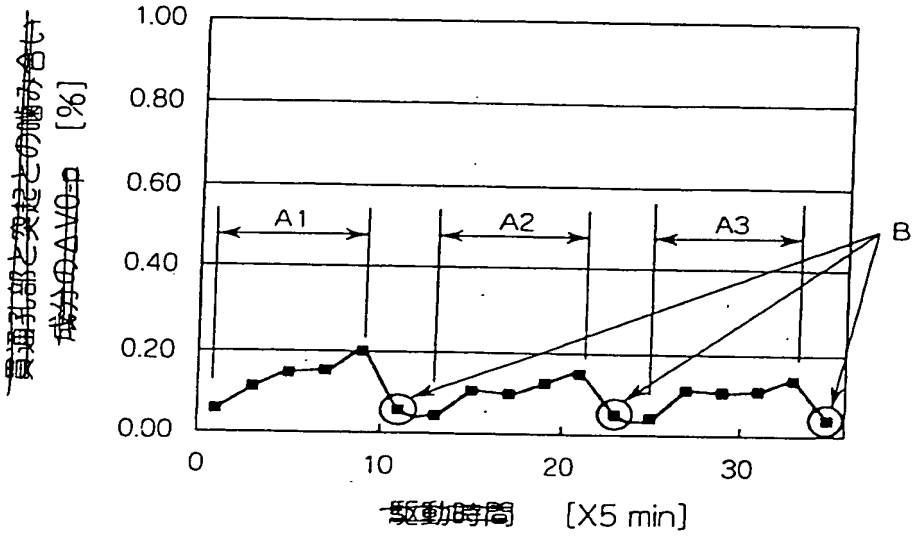


FIG. 28

drive result in plural-column hole type in exaple 1

実施例1における複数列孔タイプでの駆動結果



ΔV0-p of engagement component between through hole portions and projections

貫通孔部と突起との嵌合成分のΔV0-p [%]

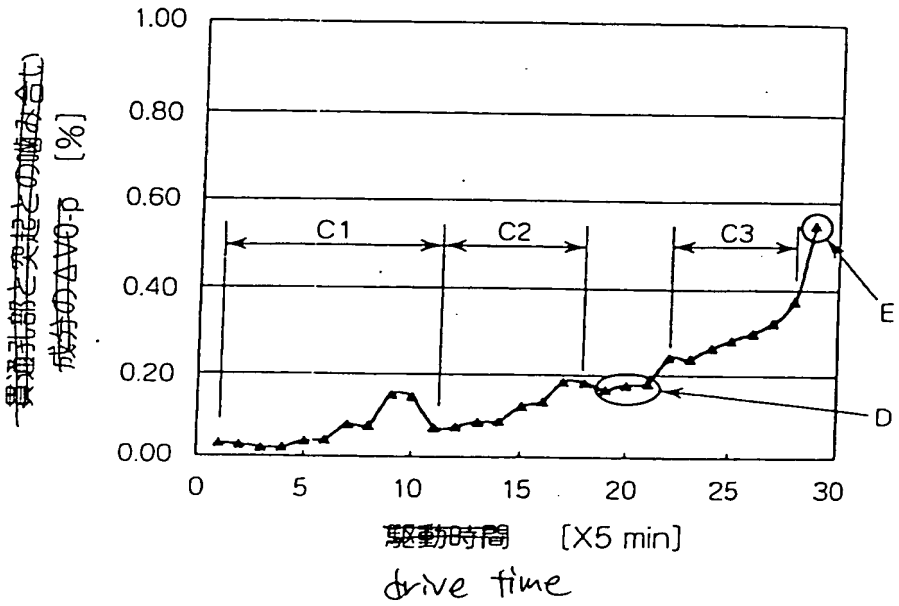
駆動時間

drive time

FIG. 29

drive result in coparative example
(one-column hole type)

~~比較例(1列孔タイプ)での駆動結果~~



~~ΔVO-p of engagement component~~
ΔVO-p of engagement component between through hole portions and projections

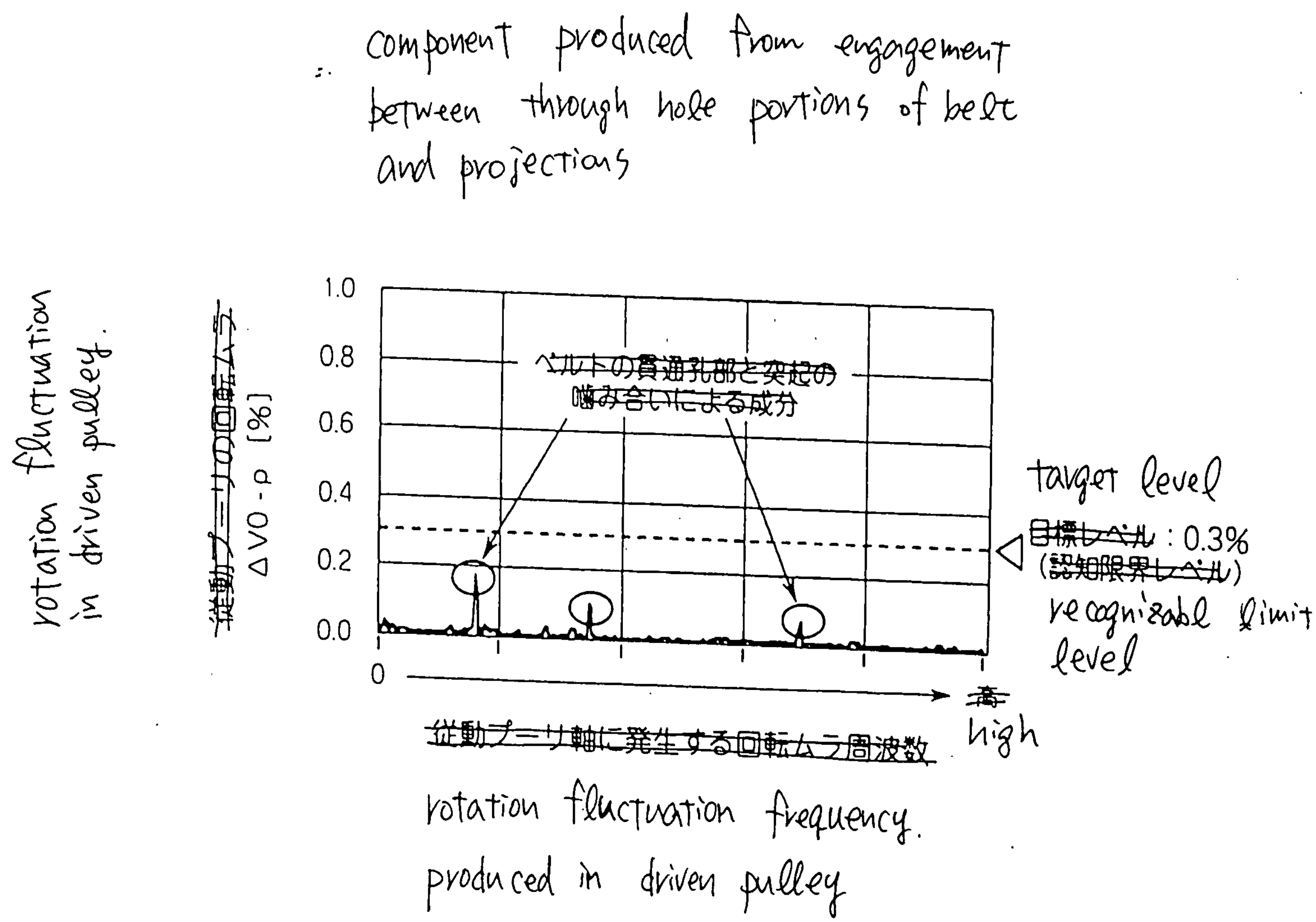

component produced from engagement between through hole portions of belt and projections
rotation fluctuation in driven pulley
従動プーリの回転ムラ
ΔVO-p [%]
1.0
0.8
0.6
0.4
0.2
0.0
0
ベルトの貫通孔部と突起の
噛み合いによる成分
target level
目標レベル : 0.3%
(認知限界レベル)
recognizable limit level
高
high
従動プーリ軸に発生する回転ムラ周波数
rotation fluctuation frequency produced in driven pulley

FIG. 31

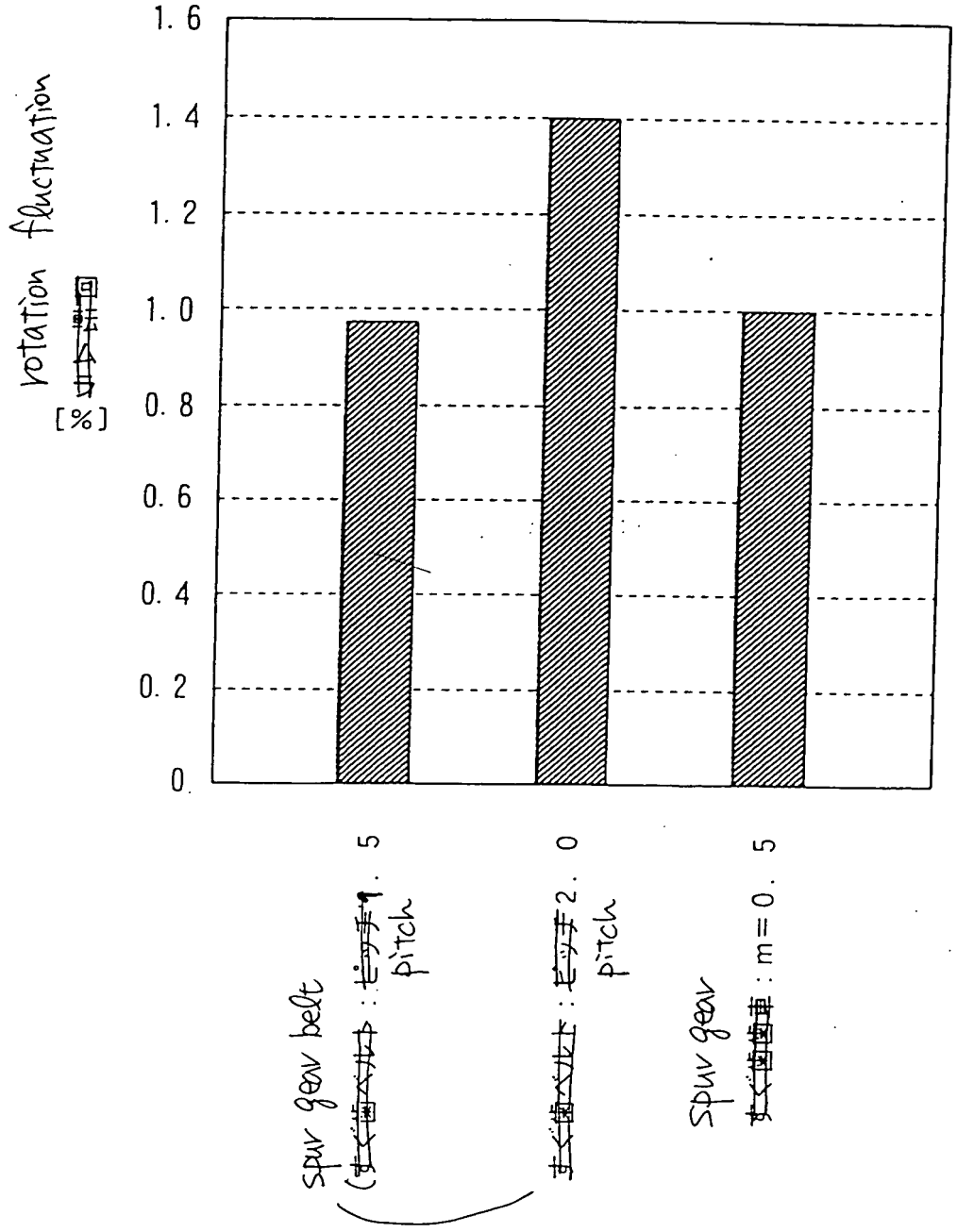

rotation fluctuation
回転変動
[%]
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
spur gear belt
(歯高さ：ピッチ1.5 pitch)
歯高さ：ピッチ2.0 pitch
Spur gear
歯高さ：m=0.5

FIG. 32

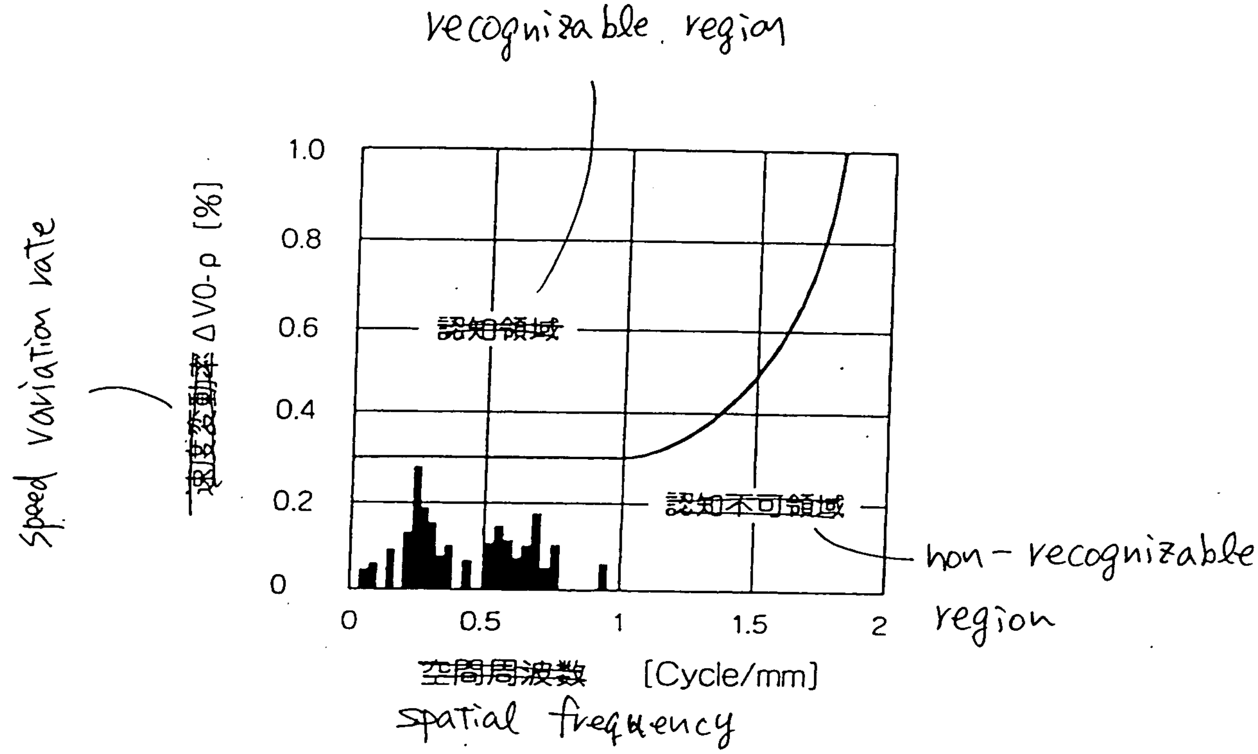
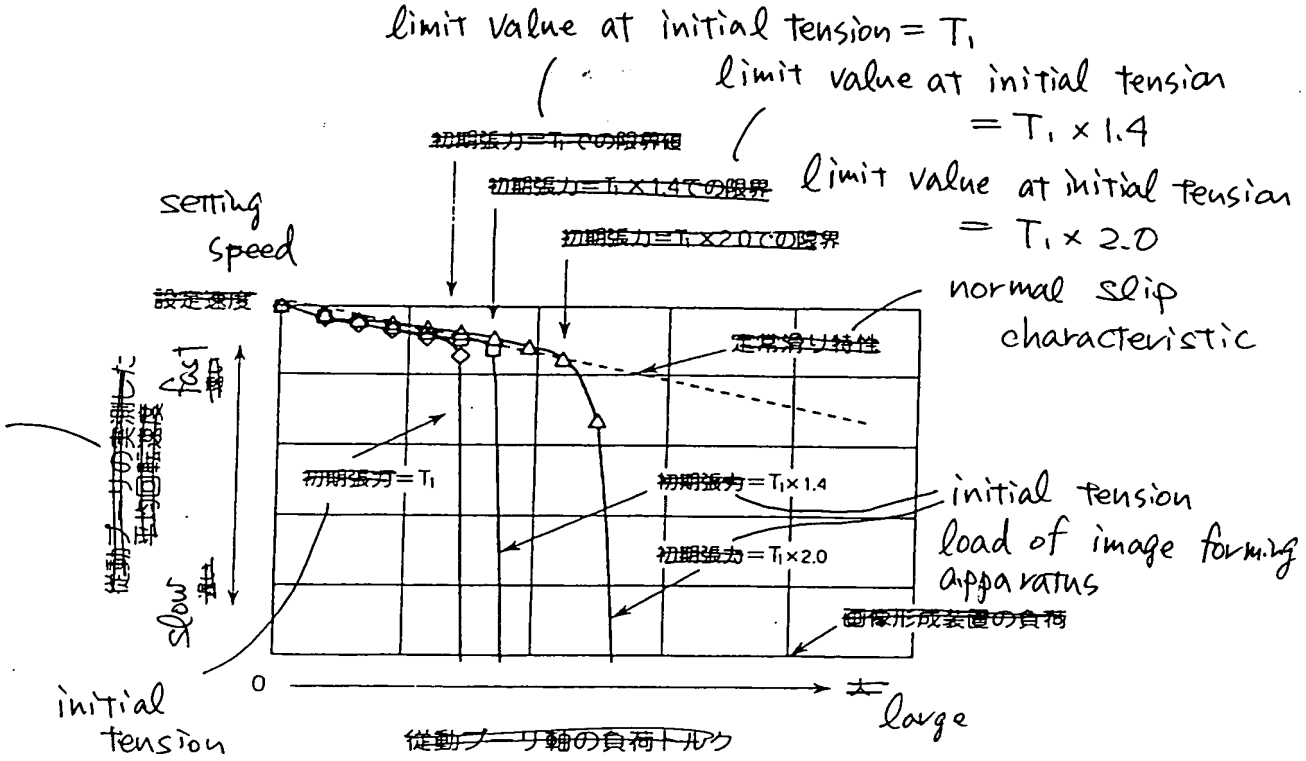

recognizable region
1.0
0.8
0.6
0.4
0.2
0
認知領域
認知不可領域
non-recognizable region
速度変動率 ΔV0-p [%]
speed variation rate
0
0.5
1
1.5
2
空間周波数 [Cycle/mm]
spatial frequency

FIG. 33



actually - measured average rotation speed of driven pulley

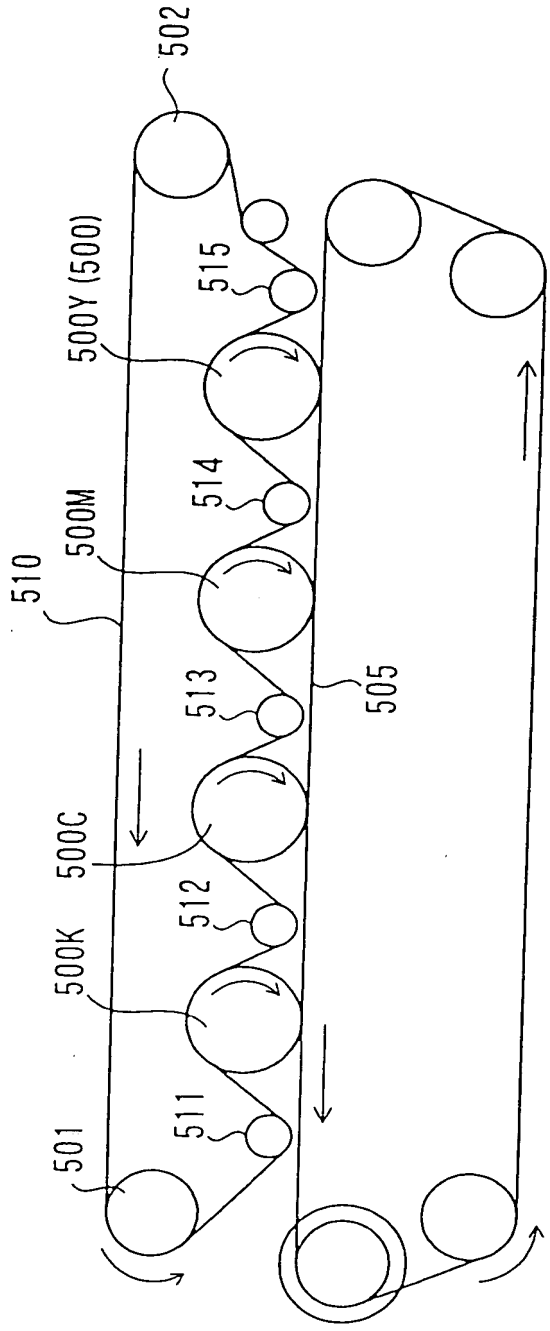


FIG. 34